

NWS: EHB-6, Software Note 14

DoD: Memo-005

FAA: EEM Modification Handbook 6345.1 CHG 9, Chap 8

**YEAR 2000 SOFTWARE REBOOT PROCEDURES FOR
THE RADAR DATA ACQUISITION GROUP, THE RADAR
PRODUCT GENERATION GROUP AND THE PRINCIPAL
USER PROCESSOR GROUP**

**DOPPLER METEOROLOGICAL RADAR
WSR-88D**



DoD Distribution Statement A - Approved for public release; distribution is unlimited.

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COMMERCE, THE AIR FORCE, THE NAVY, AND TRANSPORTATION

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1. SUBJECT

Year 2000 (Y2K) Software Reboot Procedures for the Radar Data Acquisition (RDA) Group, the Radar Product Generation (RPG) Group, and the Principal User Processor (PUP) Group.

2. PURPOSE

The version of the Concurrent Computer Corporation utility FASTCHEK used by the WSR-88D systems is not Y2K compliant. Under certain conditions, this utility is run automatically by the operating system when the computer is rebooted. As a result, the first reboot in the year 2000 will not run to completion and will require operator intervention in order for the system to return to an operational state. Upon completion of this modification the system will recover normally without any operator intervention. The authority for this modification is Operational Support Facility (OSF) Engineering Change Proposal (ECP) F0076, Y2K Compliance.

For additional information concerning this document, contact the Operational Support Facility, Hotline, Norman, Oklahoma; phone number: (800) 643-3363. An electronic copy of this software note can be found at the following Internet address:
www.osf.noaa.gov/ssb/sysdoc/techman/tmlinks.htm

3. SITES AFFECTED

These software reboot procedures apply to all WSR-88D RDA, RPG and PUP sites.

4. ESTIMATED COMPLETION DATE

The target completion date of this modification is as soon as possible on or after January 1, 2000.

5. EQUIPMENT AFFECTED

Radar Data Acquisition (RDA) Group.
Radar Product Generation (RPG) Group.
Principal User Processor (PUP) Group.

6. SOFTWARE AFFECTED

RDA, CPCI-01; RPG, CPCI-03; PUP, CPCI-04.

7. MODIFICATION ACCOMPLISHED BY

Site electronic systems analysts and/or electronic technicians will accomplish this modification.

8. MATERIAL REQUIRED

Not applicable.

9. SOURCE OF MATERIALS

Not applicable.

10. SPECIAL TOOLS AND TEST EQUIPMENT REQUIRED (SOFTWARE)

Not applicable.

11. TIME AND PERSONNEL REQUIRED

20 staff-minutes for each RDA reboot.
20 staff-minutes for each RPG reboot.
20 staff-minutes for PUP reboot.

12. DOCUMENTS AFFECTED

Not applicable.

13. VERIFICATION STATEMENT

This modification was successfully installed at the OSF.

14. DISPOSITION OF SOFTWARE SCSI TAPES

Not applicable.

15. IMPLEMENTATION PROCEDURES

See [ATTACHMENT 1](#) for the PUP reboot procedures, [ATTACHMENT 2](#) for the RPG reboot procedures, and [ATTACHMENT 3](#) for the RDA reboot procedures.

16. FAA DISTRIBUTION

This directive is distributed to selected offices and services within Washington headquarters, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, regional Airway Facilities divisions, and Airway Facilities field offices having the following facilities/equipment: NXRAD.

17. CHANGES TO TABLE OF CONTENTS (FAA)

This chapter will be included in the next revision to the table of contents for FAA Order 6345.1, Electronic Equipment Modification Handbook - Next Generation Weather Radar (NEXRAD).

18. RECOMMENDATIONS FOR CHANGES (FAA)

Forward any recommendations for changes to this directive through normal channels to the National Airway Systems Engineering Division, AOS-200, Operational Support.

19. REPORTING INSTRUCTIONS

NWS

Report completed modification on WS Form A-26, Engineering Management Reporting System Maintenance Record, according to instructions in EHB-4, Part 2, using reporting code RDA for system sites. Use reporting code PUP for PUP sites only. Record the modification number in block 17(a) as S14 (see ATTACHMENT 5 for a completed sample of WS Form A-26 for a site with a co-located RDA and PUP).

FAA (Changes to Recorded Data)

Enter this document number, date, and chapter number on the appropriate FAA Form 6032-1, Airway Facilities Modification Record.

The National Airway System Engineering Division, AOS-200, is responsible for authorizing individual software upgrades to the FAA regions and FAA NEXRAD facilities. This will be accomplished as software updates occur. Any additional questions concerning this matter should be directed to Dennis Roofe, Weather Products Branch, AOS-250, (405) 366-6590, ext. 3247, or Bettie Loudenslager, AOS-250, (405) 954-5186.

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ALL AGENCIES

Complete [ATTACHMENT 4](#) and fax, mail, or e-mail information to:

- (1) Mail Address: System Support Branch, Configuration Management Section
 Operational Support Facility
 3200 Marshall Ave, Suite 101
 Norman, Oklahoma 73072-8028

- (2) Fax Number: (405) 366-6553
 ATTN: Configuration Management Section

- (3) E-mail Address: chunt@osf.noaa.gov

ATTACHMENT 1

YEAR 2000 REBOOT PROCEDURES FOR THE PUP

INTRODUCTION

The version of the Concurrent Computer Corporation utility FASTCHECK, in use by the WSR-88D systems, is not Y2K compliant. Under certain conditions, this utility is run automatically by the operating system when the computer is rebooted. As a result, the first reboot in the year 2000 will not run to completion and will require operator intervention in order for the system to return to an operational state. The problem will occur if the reboot is commanded explicitly at the System Console while a disk is marked on, or because of power restoration after a power failure.

These procedures have been developed to minimize the effect of this problem on operations. The steps provided below should be performed as soon as possible in the year 2000, but not before the system clock reads 01/01/00 00:01:00. The procedures should be performed only once. Subsequent reboots of the system should recover normally, without any operator intervention required.

<u>Step</u>	<u>Action/Procedure</u>	<u>Comment</u>
1. (SYS Con)	Verify that the * prompt is displayed. If the * prompt is displayed proceed to the next step. If not, enter: CO<Return>	The * prompt is displayed. It may take more than one <Return> to get the * prompt to appear.
2. (SYS Con)	At the * prompt, enter: D T<Return>	Displays the date and time. Ensure that the date is 01/01/00 or later.
3. (APP Term)	Press function key <F1>	Main Menu is displayed.
4. (APP Term)	On the COMMAND: line, enter: A,C,A<Return> to cancel any active archive function(s).	Archive function(s) canceled.
5. (SYS Con)	At the * prompt, enter: PUPDOWN<Return> Wait for the message PUP SOFTWARE IS DOWN.	NOTE: DO NOT mark off the disk, as would normally be done at this time in the reboot procedure.
6. (SYS Con)	At the * prompt, while depressing the <Ctrl> key, enter: VV<Return>	CDS> prompt appears. It may take more than one <Return> to get the CDS> prompt to appear.
7. (SYS Con)	At the CDS> prompt, enter: KEY 1,Password<Return>	The default password is PUP. This turns on the necessary commands to continue. The CDS> prompt appears on the next line.

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ATTACHMENT 1 (Continued)

YEAR 2000 REBOOT PROCEDURES FOR THE PUP

<u>Step</u>	<u>Action/Procedure</u>	<u>Comment</u>
8. (SYS Con)	At the <code>CDS></code> prompt, enter: HA<Return>	Halts the CPU.
9. (SYS Con)	At the <code>CDS></code> prompt, enter: PO OFF<Return>	Turns off DC power supplies.
10. (SYS Con)	At the <code>CDS></code> prompt, enter: PO ON<Return> In approximately 60 seconds the message BASIC CONFIDENCE TEST COMPLETE appears and IPC countdown begins. Wait for the message <code>.BG: TASK PAUSED</code> before continuing to the next step.	Turns on DC power supplies and starts PUP initial bootup.
11. (SYS Con)	At the <code>* prompt</code> , enter: T.BG<Return> Be sure to include the space and the period (<code>.</code>) before the letters BG.	The <code>* prompt</code> is displayed.
12. (SYS Con)	At the <code>* prompt</code> , enter: CO<Return>	Disregard messages about possible lost data. The system should return to an operational state in approximately 2 minutes.

ATTACHMENT 2

YEAR 2000 REBOOT PROCEDURES FOR THE RPG

INTRODUCTION

The version of the Concurrent Computer Corporation utility FASTCHEK used by the WSR-88D systems is not Y2K compliant. Under certain conditions, this utility is run automatically by the operating system when the computer is rebooted. As a result, the first reboot in the year 2000 will not run to completion and will require operator intervention in order for the system to return to an operational state. The problem will occur if the reboot is commanded explicitly at the Sytem Console while a disk is marked on, or because of power restoration after a power failure.

These procedures have been developed to minimize the effect of this problem on operations. The steps provided below should be performed as soon as possible in the year 2000, but not before the system clock reads 01/01/00 00:01:00. The procedures should be performed only once. Subsequent reboots of the system should recover normally, without any operator intervention required.

NOTES

If you have an RDA/RPG Remote Access Terminal installed at your site, refer to the corresponding keystrokes that apply to your system (i.e. <Enter> versus <Return>, and <Alt><Tab> versus <Shift><Port> keys). RDA/RPG Remote Access Terminal keystroke differences will be located in a conversion chart that has been provided to you with the RDA/RPG Remote Access Terminal Installation kit. All keystrokes that have a double underline will require you to refer to the conversion chart for the applicable keystrokes (i.e. <Return> will convert to <Enter>)

FAA Redundant sites: The following procedures must be started on the active channel.

<u>Step</u>	<u>Action/Procedure</u>	<u>Comment</u>
1. (RPG SYS)	Verify that the * prompt is displayed. If the * prompt is displayed proceed to the next step. If not, enter: <u>CO<Return></u>	The * prompt is displayed. It may take more than one <u><Return></u> to get the * prompt to appear.
2. (RPG SYS)	At the * prompt, enter: <u>D T<Return></u>	Displays the date and time. Ensure that the date is 01/01/00 or later.
3. (RPG SYS)	Press the <u><Shift><Port></u> keys simultaneously. View the RPG MAIN MENU screen and check to see if the cursor is blinking on the <code>COMMAND:</code> line.	The RPG Applications menu is displayed.

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ATTACHMENT 2 (Continued)

YEAR 2000 REBOOT PROCEDURES FOR THE RPG

<u>Step</u>	<u>Action/Procedure</u>	<u>Comment</u>
4. (UCP)	Press function key <F1>	Main Menu is displayed.
The following two steps apply to NWS sites only:		
5. (UCP)	NWS sites: On the <code>COMMAND:</code> line, enter: <u>AR,C,A<Return></u> to cancel archive of product function(s).	Product archive function canceled, if active.
6. (UCP)	NWS sites: At the <code>COMMAND:</code> line, enter: <u>AR,C,S<Return></u> to cancel archive of status function.	Status archive function canceled, if active.
7. (UCP)	On the <code>COMMAND:</code> line, enter: <u>U,P,10<Return></u> to force an adaptation data update.	This command sets the status update period to 10 seconds.
8. (UCP)	FAA Redundant sites: On the <code>COMMAND:</code> line, enter: <u>RE,F<Return></u> Wait for the status message <code>OTHER RPG ADAPTATION UPDATE COMPLETED</code> before proceeding to the next step. Note the time stamp on this message:	If the message <code>OTHER RPG ADAPTATION UPDATE FAILED</code> or <code>ADAPT. DATA UPDATE REJECT, UPDATE ALREADY IN PROGRESS</code> repeat step 8. This forces the adaptation data updates to the inactive channel. This command may take up to 2 minutes to complete.
9. (UCP)	On the <code>COMMAND:</code> line, enter: <u>U,P,10<Return></u> to force another adaptation data update.	Performing this command twice will ensure both adaptation data files are up-to-date.
10. (UCP)	FAA Redundant sites: On the <code>COMMAND:</code> line, enter: <u>RE,F<Return></u> Wait for the message <code>OTHER RPG ADAPTATION UPDATE COMPLETED</code> before proceeding to the next step. The only noticable difference may be the time stamp on the message.	If the message <code>OTHER RPG ADAPTATION UPDATE FAILED</code> or <code>ADAPT. DATA UPDATE REJECT, UPDATE ALREADY IN PROGRESS</code> repeat step 10. This forces the adaptation data updates to the inactive channel. This command may take up to 2 minutes to complete.
11. (UCP)	On the <code>COMMAND:</code> line, enter: <u>U,SH,O<Return></u>	Wait for the <code>RPG SHUTDOWN</code> screen to be displayed.

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ATTACHMENT 2 (Continued)

YEAR 2000 REBOOT PROCEDURES FOR THE RPG

<u>Step</u>	<u>Action/Procedure</u>	<u>Comment</u>
12. (UCP)	Press the <u><Shift><Port></u> keys simultaneously for the RPG System Console. Wait for the message RPGMON: END OF TASK 0.	NOTE: Do NOT mark off the disk, as would normally be done at this time in the reboot procedure
13. (RPG SYS)	At the * prompt, while depressing the <u><Ctrl></u> key, enter: <u>VV<Return></u>	CDS> prompt appears. It may take more than one <u><Return></u> to get the CDS> prompt to appear.
14. (RPG SYS)	At the CDS> prompt, enter: <u>KEY 1,Password<Return></u>	The default password is RPG. This step turns on the necessary commands to continue.
15. (RPG SYS)	At the CDS> prompt, enter: <u>HA<Return></u>	The CPU is halted.
16. (RPG SYS)	At the CDS> prompt, enter: <u>PO OFF<Return></u>	Turns off DC power supplies.
17. (RPG SYS)	At the CDS> prompt, enter: <u>PO ON<Return></u> In approximately 60 seconds the message BASIC CONFIDENCE TEST COMPLETE appears and IPC countdown begins. Wait for the message .BG: TASK PAUSED before continuing to the next step.	Turns on DC power supplies and starts RPG initial bootup.
18. (RPG SYS)	At the * prompt, enter: <u>T.BG<Return></u> Be sure to include the space and the period (.) before the letters BG.	The * prompt is displayed.
19. (RPG SYS)	At the * prompt, enter: <u>CO<Return></u>	Disregard messages about possible lost data. The system should return to an operational state in approximately 2 to 3 minutes.
20. (RPG SYS)	Press the <u><Shift><Port></u> keys simultaneously. View the RPG MAIN MENU screen and check to see if the cursor is blinking on the COMMAND: line.	The RPG Applications menu is displayed.

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ATTACHMENT 2 (Continued)

YEAR 2000 REBOOT PROCEDURES FOR THE RPG

<u>Step</u>	<u>Action/Procedure</u>	<u>Comment</u>
21.	FAA Redundant sites: Repeat steps 1. through 4. and 11. through 20. for the other channel.	
The following steps apply to NWS sites only:		
22. (UCP)	NWS Sites: On the <code>COMMAND:</code> line, enter: <u>AR,A,S<Return></u> to start archive of status function.	Archive of Status function is started.
23. (UCP)	NWS Sites: On the <code>COMMAND:</code> line, enter: <u>AR,A,P<Return></u> to start archive of products function.	Archive of Products function started.

ATTACHMENT 3

YEAR 2000 REBOOT PROCEDURES FOR THE RDA

INTRODUCTION

The version of the Concurrent Computer Corporation utility FASTCHEK used by the WSR-88D systems is not Y2K compliant. Under certain conditions, this utility is run automatically by the operating system when the computer is rebooted. As a result, the first reboot in the year 2000 will not run to completion and will require operator intervention in order for the system to return to an operational state. The problem will occur if the reboot is commanded explicitly at the System Console while a disk is marked on, or because of power restoration after a power failure.

These procedures have been developed to minimize the effect of this problem on operations. The steps provided below should be performed as soon as possible in the year 2000, but not before the system clock reads 01/01/00 00:01:00. The procedures should be performed only once. Subsequent reboots of the system should recover normally, without any operator intervention required.

NOTE

If you have an RDA/RPG Remote Access Terminal installed at your site, refer to the corresponding keystrokes that apply to your system (i.e. <Enter> versus <Return>, and <Alt><Tab> versus <Shift><Port> keys). RDA/RPG Remote Access Terminal keystrokes differences will be located in a conversion chart that has been provided to you with the RDA/RPG Remote Access Terminal Installation kit. All keystrokes that have a double underline will require you to refer to the conversion chart for the applicable keystrokes (i.e. <Return> will convert to <Enter>).

<u>Step</u>	<u>Action/Procedure</u>	<u>Comment</u>
1. (RPG SYS)	Verify that the * prompt is displayed. If the * prompt is displayed proceed to the next step. If not, enter: <u>CO<Return></u>	The * prompt is displayed. It may take more than one <u><Return></u> to get the * prompt to appear.
2. (RPG SYS)	At the * prompt, enter: <u>D T<Return></u>	Displays the date and time. Ensure that the date is 01/01/00 or later.
3. (RPG SYS)	Press the <u><Shift><Port></u> keys simultaneously. View the RPG MAIN MENU screen and check to see if the cursor is blinking on the COMMAND: line.	The RPG Applications menu is displayed.
4. (RPG SYS)	Press function key <F1> , then at the COMMAND: line, enter: <u>RD,EN<Return></u>	This transfers control to the RDA.

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ATTACHMENT 3 (Continued)

YEAR 2000 REBOOT PROCEDURES FOR THE RDA

<u>Step</u>	<u>Action/Procedure</u>	<u>Comment</u>
NOTE		
The following steps require action at the RDA maintenance terminal, Applications screen.		
5. (RDA Term)	If the Main Menu is displayed, proceed to the next step. If the Main Menu is not displayed, enter on the <code>COMMAND:</code> line: <u>MAIN<Return></u>	Main Menu appears on the display.
6. (RDA Term)	On the <code>COMMAND:</code> line, enter: <u>RELC<Return></u>	This accepts control from the UCP.
7. (RDA Term)	On the <code>COMMAND:</code> line, enter: <u>STBY<Return></u>	This places the RDA into standby.
8. (RDA Term)	On the <code>COMMAND:</code> line, enter: <u>TERP<Tab>Password<Return></u>	Applications software is canceled.
9. (RDA Term)	Press the <u><Shift><Port></u> keys simultaneously. Wait for the message: TASK02: END OF TASK 255.	System Console is displayed.
10. (RDA SYS)	At the * prompt, while depressing the <u><Ctrl></u> key, enter: <u>VV<Return></u>	CDS> prompt appears. It may take more then one <u><Return></u> to get the CDS> prompt to appear.
11. (RDA SYS)	At the CDS> prompt, enter: <u>KEY 1,Password<Return></u>	The default password is RDA. This step turns on the necessary commands to continue.
12. (RDA SYS)	At the CDS> prompt, enter: <u>HA<Return></u>	The CPU is halted and the CDS> prompt is displayed.
13. (RDA SYS)	At the CDS> prompt, enter: <u>PO OFF<Return></u>	Turns off DC power supplies.
14. (RDA SYS)	At the CDS> prompt, enter: <u>PO ON<Return></u> In approximately 60 seconds the message BASIC CONFIDENCE TEST COMPLETE appears and IPC countdown begins. Wait for the message .BG: TASK PAUSED before continuing with to the next step.	Turns on DC power supplies and starts RDA initial bootup.

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ATTACHMENT 3 (Continued)

YEAR 2000 REBOOT PROCEDURES FOR THE RDA

<u>Step</u>	<u>Action/Procedure</u>	<u>Comment</u>
15. (RDA SYS)	At the * prompt, enter: <u>T.BG<Return></u> Be sure to include the space and the period (.) before the letters BG.	The * prompt is displayed.
16. (RDA SYS)	At the CDS> prompt, enter: <u>CO<Return></u>	Disregard messages about possible lost data. The system should return to an operational state in approximately 2 minutes.
17. (RDA SYS)	Press the <u><Shift><Port></u> keys simultaneously.	Applications software is displayed.
18.	Redundant sites: repeat steps 1. through 17. for the other channel.	
19. (RDA Term)	At the * prompt, enter: <u>ENRC<Return></u>	Control of the radar is sent back to the UCP terminal.

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ATTACHMENT 4

Y2K COMPLIANCE RETURN FORM

Site Name: _____

Site Identifier: _____

Total Time to complete this NWS Software Note/DoD Memo/FAA EEM: _____

Technician's Name(s): _____

Technician's Phone Number: _____

Date Completed: _____

Problem(s) Encountered:

Upon completion of this form, mail, fax, or e-mail this information to the OSF:

1. Mailing Address: System Support Branch, Configuration Management Section
 WSR-88D Operational Support Facility
 3200 Marshall Ave, Suite 101
 Norman, OK 73072-8028
2. FAX Number: (405) 366-6553,
 ATTN: Configuration Management Section
3. E-mail Address: chunt@osf.noaa.gov